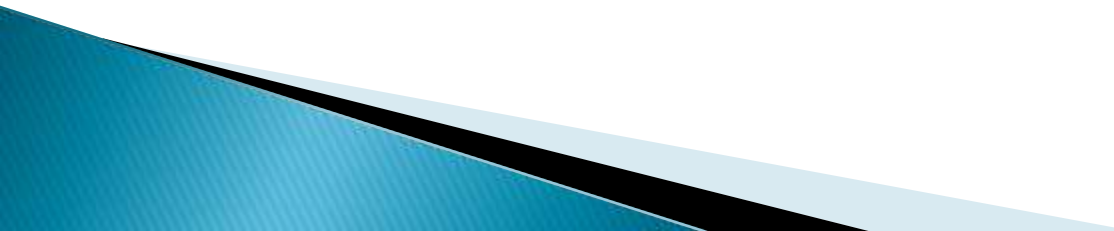


# Programing Engineering

Introduction – 22 February 2017

Adrian Iftene  
adiftene@info.uaic.ro

# Content

- ▶ Team
  - ▶ Course content
  - ▶ Labs
  - ▶ Project
  - ▶ Exam
  - ▶ Marks
  - ▶ Communication protocol
  - ▶ Bibliography
- 

# Team

- ▶ Course:

- Adrian Iftene
- Alex Moruz

[adiftene@info.uaic.ro](mailto:adiftene@info.uaic.ro)

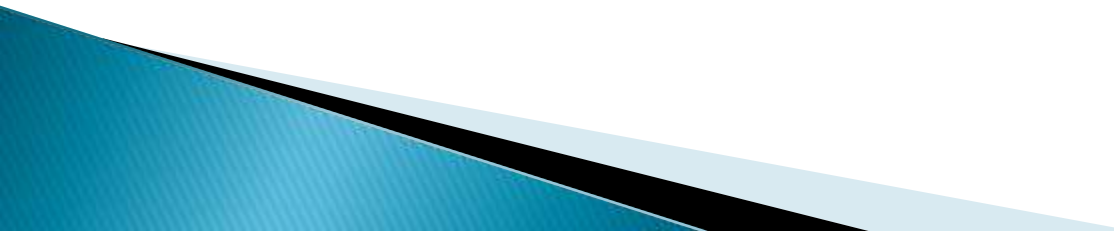
[mmoruz@info.uaic.ro](mailto:mmoruz@info.uaic.ro)

- ▶ Labs:

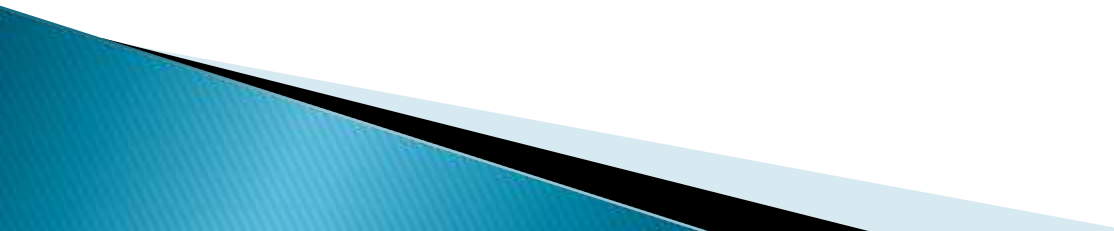
- Adrian Iftene

[adiftene@info.uaic.ro](mailto:adiftene@info.uaic.ro)

# Course content

- ▶ Software engineering
  - ▶ Design models
  - ▶ Requirements engineering
  - ▶ UML diagrams
  - ▶ Design patterns
  - ▶ Testing and debugging
  - ▶ Maintenance
  - ▶ Software metrics
  - ▶ Project management
  - ▶ Intellectual property and rights
- 

# Courses (2)

- ▶ **Why attend courses?**
  - ▶ To better understand theoretical aspects + case studies
  - ▶ 40 of 240 points for the exam come from questions which are discussed, without appearing on slides
  - ▶ Bonuses... Presentations...
- 

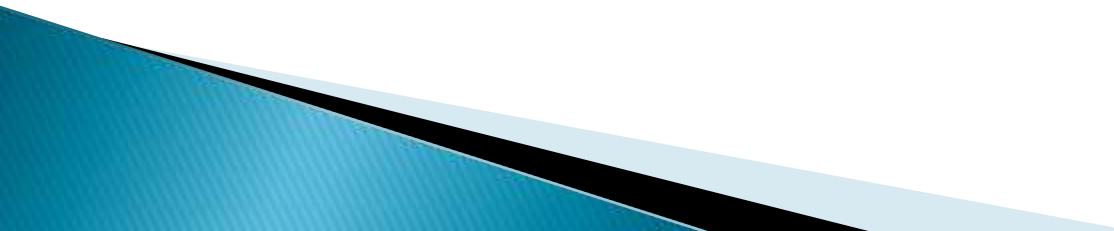
# Laboratories

- ▶ UML diagrams, Design Patterns, Unit testing
- ▶ Implementations in Java, C++, C#, OOP (coding style)
- ▶ Topics proposed by the teacher, students
- ▶ We will negotiate scores per team member (team of 4 can get 34 points, distributed  $9 + 9 + 8 + 8$ , or any combination determined by TL)
- ▶ If all team members receive the same score, laboratory coordinator will decide who presents the solution next week
- ▶ There is no upper limit to the points received
- ▶ THERE exists a lower limit for the points received: 50% of the sum of labs points
- ▶ **Important:** Make connections with the Java and Web technologies laboratories!!!

# Laboratories (2)

- ▶ We will use: Github, *BitBucket...*
- ▶ Why to come to the labs? To be a part of a team, to earn points, learn to use project management techniques, to pass
- ▶ Group of "elite students" – in work...
  - A higher level of discussion
  - A complicated but interesting project
  - Greater involvement
  - Who is in it? The "select" (i.e. those receiving permission)

# Laboratories (3)

- ▶ Elite group – past years
  - ▶ 6–7 projects
    - Projects proposed by IT companies (e-mail client in Qt, Android Remote Control, WebApp for mobile apps)
    - A project proposed by first year masters: AR
  - ▶ Results
    - Internships in IT companies
    - Vouchers to support certification exam in Qt
    - AR group managed to create a prototype that they presented at SYNASC 2010, Timișoara. Article has been indexed IEEE and DBLP
- 



# Project


- ▶ Team work!
- ▶ It will involve:
  - Documentation, Modeling using UML diagrams
  - Implementation (main module, interface)
  - Testing, Evaluation, Documentation, Etc.
- ▶ Topics
  - Proposed by IT companies
  - CLEF 2017 (<http://clef2017.clef-initiative.eu/>): ImageCLEF, Plagiarism, QA, Social Book Search
- ▶ Frameworks and languages: C++, **Java**, Perl, Python, Java Script, C#

# Project – Contest

- ▶ The best projects (5–6) will participate, during the last weeks of the semester (13–16), at a session of presentations
- ▶ At these sessions we will have a panel of professors and company representatives
- ▶ Students will receive bonuses, diplomas and prizes

▶ Learn & Earn – Amazon

# Exam

- ▶ Without documentation
  - ▶ 30 minutes
  - ▶ Questions: grille + requiring answers on 2–3 lines + diagrams/schemes
  - ▶ The emphasis will be on understanding the theoretical concepts presented in courses and practical ones used during the laboratories
- 

# Marks

- ▶ **Lab grade** – obtained during the first 6 labs (weekly assignments, teamwork)
- ▶ **Project grade** – obtained during the last 7 laboratories (a project where each member will contribute)
- ▶ **Exam grade** – 30 minutes, the focus will be on understanding the concepts presented
- ▶ **Final grade** =  $10 \times (\text{Lab\_grade} + \text{Project\_grade} + \text{Exam\_grade}) / \text{MAX\_GRADES\_WITHOUT\_BONUSES}$


# Communication protocol

- ▶ Upon request, the solutions at certain stages will be sent by e-mail
- ▶ 3 requests:
  - Subject: [IP] – Solution stage X
  - Attachment: TGZ , RAR, archive etc. (**not ZIP**)
  - Content: Signature Ionescu George, Year II, Group 2 E
- ▶ **FAILURE to do so will result in downgrading (1 point for each missed requirement)**

# Bibliography

- ▶ Course page Adrian Iftene  
<http://profs.info.uaic.ro/~adiftene/Scoala/2017/PE/>
- ▶ Ovidiu Gheorghies page (he works with Adriana G.)  
<http://profs.info.uaic.ro/~ogh/ip/>
- ▶ Ian Sommerville: Software Engineering, Addison Wesley, 2001
- ▶ Craig Larman: Applying UML and Patterns, Addison Wesley, 2002
- ▶ Erich Gamma, Richard Helm, Ralph Johnson, John Vissides: Design Patterns, Elements of Reusable Object-Oriented Software, Addison Wesley, 1998
- ▶ Internet

# Final results PE 2009–2016

- ▶ The continuation of these ideas and completing your graduation thesis in one of these areas
  - ▶ Research articles and participation in conferences
  - ▶ Long-term research bachelor, master, doctoral, post-doctoral (we have collaborations with universities in Spain, Italy, England, Ireland, France, etc.)
- 

# Results PE 2009 (1)

Evaluating Systems for Multilingual and Multimodal Information Access - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.springer.com/computer+science/ai/book/978-3-642-04446-5

Most Visited Getting Started Latest Headlines

Evaluating S Search Evaluating Systems for Multilingual and Multimodal Information Access

Evaluating Systems for Multi...

Romania Change

Springer

New User LOGIN

HOME MY SPRINGER SUBJECTS SERVICES IMPRINTS & PUBLISHER ABOUT US

Search... GO

» Artificial Intelligence Home > Computer Science > Artificial Intelligence

SUBDISCIPLINES JOURNALS TEXTBOOKS SERIES BOOKS SHARE

Evaluating Systems for Multilingual and Multimodal Information Access

9th Workshop of the Cross-Language Evaluation Forum, CLEF 2008, Aarhus, Denmark, September 17-19, 2008, Revised Selected Papers  
Series: » Lecture Notes in Computer Science  
Subseries: » Information Systems and Applications, incl. Internet/Web, and HCI, Vol. 5706

Peters, C.; Deselaers, Th.; Ferro, N.; Gonzalo, J.; Jones, G.J.F.; Kurimo, M.; Mandl, Th.; Peñas, A.; Petras, V. (Eds.)

2009, XXIV, 1002 p., Softcover  
ISBN: 978-3-642-04446-5

Online orders shipping within 2-3 days.

111,00 €

SpringerLink Read online

SERVICES FOR THIS BOOK

Free Online Book Review Copy

NEW BOOK ALERT

Get alerted on new Springer publications in the subject area of Language Translation and Linguistics.

Your E-Mail Address

SUBMIT

RELATED BOOKS - SERIES - JOURNALS

Book

Advances in Multilingual and Multimodal Information Retrieval

Editors: Peters, Gerd (et al.)

Proj., BibSonomy, CiteULike, ScientificCommons, I

## XML

You may download DBLP XML a single DTD is available.



# Results DF 2009 (2) – Corfu, Greece



# Results PE 2009 (3) CLEF – WN

Welcome to Cross Language Evaluation Forum - Mozilla Firefox

File Edit View History Bookmarks Tools Help


http://www.clef-campaign.org/2009/working\_notes/CLEF2009WN-Contents.html

Most Visited Getting Started Latest Headlines

Search

Welcome to Cross Language ...

## Cross Language Evaluation Forum



- Top
- Ad Hoc
- ICLEF
- QA@CLEF
- ImageCLEF
- INFILE@CLEF
- VideoCLEF
- CLEF-IP
- LogCLEF
- Grid@CLEF
- MorphoChallenge
- Appendices

**Español**

[Users' Image Seeking Behavior in a Multilingual Tag Environment](#)  
Miguel E Ruiz and Pok Chin

[UAIC at iCLEF 2009: Analysis of Logs of Multilingual Image Searches in Flickr](#)  
Florin-Tudor Cristea, Vlad Alexa and Adrian Iftene

[UNED at iCLEF 2009: Analysis of Multilingual Image Search Sessions](#)  
Victor Peinado, Fernando López-Ostenero and Julio Gonzalo


[Lexical Ambiguity in Cross-language Image Retrieval: a Preliminary Analysis](#)  
Borja Navarro-Colorado, Marcel Puchol-Blasco, Rafael M. Terol, Sonia Vázquez and Elena Lloret

[Users' Perceptions of Searching in Flickr](#)  
Evgenia Vassilakaki, Frances Johnson, R.J. Hartley and David Randall

### Multiple Language Question Answering (QA@CLEF)

[Overview of ResPubliQA 2009: Question Answering Evaluation over European Legislation](#)  
Anselmo Peñas, Pamela Forner, Richard Sutcliffe, Álvaro Rodrigo, Corina Forăscu, Iñaki Alegria, Danilo Giampiccolo, Nicolas I  
Petya Osenova

CLEF is an activity of the [TrebleCLEF Coordination Action](#)



All text is available under the terms of the [Creative Commons Licence](#)

Find: Next Previous Highlight all Match case



# Results PE 2009–2010

springer.com springerprotocols.com English

Go



SEARCH FOR

AUTHOR OR EDITOR

PUBLICATION

VOLUME

ISSUE

PAGE

GO

Advanced Search ▼

Search Tips

You have Guest access.

What can I do as a guest?

HOME

MY SPRINGERLINK

BROWSE

TOOLS

HELP



SHOPPING CART

LOG IN

Related

Book

Series

COMPUTER SCIENCE



MULTILINGUAL INFORMATION ACCESS EVALUATION II. MULTIMEDIA EXPERIMENTS

Lecture Notes in Computer Science, 2010, Volume 6242/2010, 277-282, DOI: 10.1007/978-3-642-15751-6\_34



## Using SIFT Method for Global Topological Localization for Indoor Environments

Emanuela Boroş, George Roşca and Adrian Iftene



Download PDF (212.1 KB)



Look Inside



Permissions & Reprints

REFERENCES (7)

EXPORT CITATION

ABOUT

### Abstract

The paper represents a brief description of our system as one of the solutions to the problem of global topological localization for indoor environments. The experiment involves analyzing images acquired with a perspective camera mounted on a robot platform and applying a feature-based method (SIFT) and two main systems in order to search and classify the given images. To obtain acceptable results and improved performance improvement, the algorithm acquires two main maturity levels: one

#### View Related Documents

- ☐ Book Chapter  
**The Robot Vision Task** Andrzej Pronobis
- ☐ Book Chapter  
**Overview of the CLEF 2009 Robot Vision Track** Andrzej Pronobis
- ☐ Book Chapter  
**University of Glasgow at ImageCLEF 2009 Robot Vision Task: A Rule Based Approach** Yue Feng
- ☐ Journal Article  
**A fast algorithm and software for analysis of FT-ICR data** David R. Gibson
- ☐ Book Chapter  
**Image Histogram Constrained SIFT Matching** Ye Luo

Related Books at Springer.com

# Results ASET 2009

- ▶ Many themes continued as dissertation topics
- ▶ Contests, publications

Sesiunea Nationala **ITS 2010**  
de Comunicari Stiintifice Studentesti

[Prima pagina](#) [Galerie](#) [Rezultate Finale](#) [Parteneri/Sponsori](#) [Organizatori](#) [Contact](#)

## Rezultate Finale

Nr.	Titlu Lucrare	Autor	Institutie
Premiul 1	Sisteme de creștere a siguranței transportului rutier	Mircea CÎRCEAG, Isabela MOCANU, Răzvan MUNTEANU	an III, Facultatea Transporturi, Universitatea „Politehnica” din București
Premiul 2	Sistem distribuit de Management al Traficului	Emilian NECULA, Raluca NECULA	Master, Facultatea de Informatica, Universitatea „A.I.Cuza” Iași
Premiul 2	Sisteme de informare a călătorilor	Camelia BUNEA, Andrei ȘORIGA	an IV, Facultatea Transporturi, Universitatea „Politehnica” din București
Premiul 3	Sistem de alarmă cu transmiterea mesajului pe telefonul mobil	Alexandru STOICA	an III, Facultatea Transporturi, Universitatea „Politehnica” din București
Premiul 3	Autovehiculul hibrid	Radu DINU, Ionuț FLOREA, Diana TUDORACHE	an II, Facultatea Transporturi, Universitatea „Politehnica” din București
Mentiune	Aplicatie GPS pentru PC	Andrei GEORGESCU	Master, Facultatea de Informatica, Universitatea „A.I.Cuza” Iași

[Browse](#) > [Conferences](#) > [Roedunet International Confere ...](#)

## Using a genetic algorithm for optimizing the similarity aggregation step in the process of ontology alignment

Download Citation Email Print Rights and Permissions

Alexandru-Lucian, Ginsca; Iftene, Adrian;  
Faculty of Computer Science, "Al. I. Cuza"  
University, Iasi, Romania

**This paper appears in:** [Roedunet International Conference \(RoEduNet\), 2010 9th](#)

**Issue Date:** 24-26 June 2010

**On page(s):** 118 - 122

**Location:** Sibiu, Romania

**ISSN:** 2068-1038

**Print ISBN:** 978-1-4244-7335-9

**Date of Current Version:** 05 August 2010

### ABSTRACT

This paper addresses the increasingly encountered challenge of ontology alignment. Starting with basic similarity measures such as the syntactic similarity, represented by the Levenshtein or Jaro Distance, semantic similarities, which make use of WordNet and taxonomy similarities, our new system uses a genetic algorithm specially designed for the task of finding the combination of the most appropriate similarity measures in the context of

### Access The Full Text

**SIGN IN:** Full text access may be available with your subscription

User Name

[Forgot Username/Password?](#)

[Athens/Shibboleth Sign In](#)

**Already Purchased?**  
[View Now.](#)

**Purchase Now**

### Not a subscriber?

Get full-text access with a subscription to the IEEE Xplore® digital library.



Find the option that's right for you.

[LEARN MORE](#)

# 2011–2012

- ▶ <http://dblp.uni-trier.de/pers/hd/g/G=icirc=nsca:Alexandru=Lucian>

# 2013-2014

← → ↻ dblp.uni-trier.de/pers/hd/s/Siriteanu:Alexandra

home |



dblp

computer science bibliography

[+] Alexandra Siriteanu ⬇ ⌂ ⌕ ⌘

> Home > Persons

[−] 2010 - today ⓘ

2014

■ [c2] ⌂ ⬇ ⌂ ⌕ ⌘ Ralf Bierig, Cristina Serban, Alexandra Siriteanu, Mihai Lupu, Allan Hanbury:  
**A System Framework for Concept- and Credibility-Based Multimedia Retrieval.**  
ICMR 2014: 543

2013

■ [c1] ⌂ ⬇ ⌂ ⌕ ⌘ Cristina Serban, Alexandra Siriteanu, Claudia Gheorghiu, Adrian Iftene, Lenuta Alboaie, Mihaela Breaban:  
**Combining Image Retrieval, Metadata Processing and Naive Bayes Classification at Plant Identification 2013.** CLEF (Working Notes) 2013



# 2015 – 2016

## Using Textual and Visual Processing in Scalable Concept Image Annotation Challenge

Alexandru Calfa, Dragoș Silion, Andreea Cristina Bursuc, Cornel Paul Acatrinei, Răzvan Iulian Lupu, Alexandru Eduard Cozma, Cristian Pădurariu, Adrian Iftene

UAIC: Faculty of Computer Science, “Alexandru Ioan Cuza” University, Romania  
{alexandru.calfa, dragos.silion, andreea.bursuc, paul.acatrinei, razvan.lupu, eduard.cozma, cristian.padurariu, adiftene}@info.uaic.ro

**Abstract.** This paper describes UAIC<sup>1</sup>'s system built for participating in the Scalable Concept Image Annotation challenge 2015. We submitted runs both for Subtask 1 (Image Concept detection and localisation) and for Subtask 2 (Generation of Textual Descriptions of Images). For the first subtask we created an ontology with relations between concepts and their synonyms, hyponyms and hypernyms and also with relations between concepts and related words. For the second subtask, we created a resource that contains triplets (*concept<sub>1</sub>*, *verb*, *concept<sub>2</sub>*), where *concepts* are from the list of concepts provided by the organizers and *verb* is a relation between concepts. With this resource we build sentences in which *concept<sub>1</sub>* is subject, *verb* is predicate and *concept<sub>2</sub>* is complement.

## Using Machine Learning Techniques, Textual and Visual Processing in Scalable Concept Image Annotation Challenge

Alexandru-Gabriel Cristea, Mădălin-Marian Savoia, Monica-Andreea Martac, Ionela Cristina Pîtraș, Alexandru-Ovidiu Scutaru, Constantin-Emilian Covrig, Adrian Iftene

UAIC: Faculty of Computer Science, “Alexandru Ioan Cuza” University, Romania  
{alexandru.cristea, madalin.savoia, monica.martac, ionela.patras, alexandru.scutaru, constantin.covrig, adiftene}@info.uaic.ro

**Abstract.** This paper describes UAIC<sup>1</sup>'s system built for participating in the Scalable Concept Image Annotation challenge 2016. We submitted runs for Subtask 1 (Image annotation and localisation), for Subtask 2 (Natural language caption generation) and for Subtask 3 (Content Selection). For the first subtask we used an ontology created last year with relations between concepts and their



The screenshot shows a web browser window with the address bar displaying 'dblp.uni-trier.de/pers/hd/c/CalfaAlexandru'. The page features the dblp logo (a stylized 'd' and 'b' in blue and yellow) and the text 'dblp computer science bibliography'. Below this, the name 'Alexandru Calfa' is prominently displayed with social media icons. A navigation bar shows '> Home > Persons'. A filter bar indicates '2010 - today'. The main content area, dated '2015', lists a publication entry for Alexandru Calfa, Dragoș Silion, Andreea Cristina Bursuc, Cornel Paul Acatrinei, Razvan Iulian Lupu, Alexandru Eduard Cozma, Cristian Pădurariu, and Adrian Iftene, titled 'Using Textual and Visual Processing in Scalable Concept Image Annotation Challenge. CLEF (Working Notes) 2015'.